Prescription Drug Abuse and Overdose: Public Health Perspective

[Residency educators may use the following slides for their own teaching purposes.]

CDC's Primary Care and Public Health Initiative
October 24, 2012
Overview of Presentation

- CDC prescription drug abuse and overdose goal

- Public health approach to prescription drug abuse and overdose
  - Define the problem
  - Identify risk and protective factors
  - Develop and test prevention strategies
  - Ensure widespread adoption

- Additional resources
CDC Goal

- Reduce abuse and overdose of opioids and other controlled prescription drugs while ensuring patients with pain are safely and effectively treated.
The Public Health Approach to Prevention

1. Define the Problem
2. Identify Risk and Protective Factors
3. Develop and Test Prevention Strategies
4. Ensure Widespread Adoption
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Opioid Prescriptions Dispensed by Retail Pharmacies—United States, 1991–2011

Number of Prescriptions (in millions)

Year


76 78 80 86 91 96 100 109 120 131 139 144 151 158 169 180 192 201 202 210 219

Emergency Department Visits Related to Drug Misuse or Abuse—United States, 2004–2010

SAMHSA. Highlights of the 2010 Drug Abuse Warning Network (DAWN) Findings on Drug-Related ED Visits, 2011.
Primary Substance of Abuse at Treatment Admission—United States, 2000–2010

SAMHSA Treatment Episode Data Set, 2000-2010.

Number of Drug Overdose Deaths Involving Opioid Pain Relievers and Other Drugs United States, 1999–2010

CDC, National Center for Health Statistics, National Vital Statistics System.
Drug Overdose Deaths by Major Drug Type, United States, 1999–2010

Public Health Impact of Opioid Use

For every 1 overdose death in 2010, there were

- Past Year Nonmedical Users: 733
- People with abuse/dependence: 108
- ED visits for misuse or abuse: 26
- Abuse treatment admissions: 10

Treatment admissions are for primary use of opioids from Treatment Exposure Data set.
Emergency department visits are from DAWN (Drug Abuse Warning Network), [https://dawninfo.samhsa.gov/default.asp](https://dawninfo.samhsa.gov/default.asp).
Abuse/dependence and nonmedical use in the past month are from the National Survey on Drug Use and Health.
Economic Costs

- $72.5 billion in health care costs\(^1\)

- Opioid abusers generate, on average, annual direct health care costs 8.7 times higher than nonabusers\(^2\)


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High Risk Populations

- People taking high daily doses of opioids
- People who “doctor shop”
- People using multiple abuseable substances like opioids, benzodiazepines, other CNS depressants, illicit drugs
- Low-income people and those living in rural areas
- Medicaid populations
- People with substance abuse or other mental health issues

Rates of Opioid Overdose Deaths, Sales, and Treatment Admissions, United States, 1999–2010

Opioid Sales KG/10,000  Opioid Deaths/100,000  Opioid Treatment Admissions/10,000

CDC. MMWR 2011. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm60e1101a1.htm?s_cid=mm60e1101a1_w. Updated with 2009 mortality and 2010 treatment admission data.
Drug Overdose Death Rate, 2008, and Opioid Pain Reliever Sales Rate, 2010

Drug Overdose Death Rates by Age—United States, 1999–2010

Deaths per 100,000 population

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

15–24
25–34
35–44
45–54
55–64
65 and over

CDC, NCHS, National Vital Statistics System.
High Opioid Dose and Overdose Risk

*Overdose defined as death, hospitalization, unconsciousness, or respiratory failure.

High Opioid Dose and Overdose Risk

* Overdose defined as defined cases as people who died of an opioid-related cause.

High Opioid Dose and Overdose Risk

* Overdose defined as death with an underlying cause-of-death code from the ICD-10 of X42, X44, Y12, or Y14

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CDC in Context of National Response

- Blueprint for federal government
- Focus areas
  1. Education
  2. Monitoring
  3. Disposal
  4. Enforcement
- CDC role: fits within our mission and complements other federal agencies
CDC Strategic Focus Areas

- Enhance surveillance
- Inform policy
- Improve clinical practice
Intervention Points

- Pill mills
- Problem prescribing
- General prescribing
- EDs and hospitals
- Pharmacies
- Insurer and pharmacy benefit managers
- General patients & the public
- People at high risk of overdose
Intervention Recommendations

- Prescription drug monitoring programs
- Patient review and restriction programs
- Laws/regulations/policies
- Insurers and pharmacy benefit managers mechanisms
- Clinical guidelines
Prescription Drug Monitoring Programs (PDMPs)

- Operational in 42 states
- Focus PDMPs on
  - Patients at highest risk of abuse and overdose
  - Prescribers who clearly deviate from accepted medical practice
- Implement PDMP best practices
Patient Review and Restriction Programs (aka “Lock-In” Programs)

- Applies to patients with inappropriate use of controlled substances
- 1 prescriber and 1 pharmacy for controlled substances
- Improve coordination of care and ensure appropriate access for patients at high risk for overdose
- Evaluations show cost savings as well as reductions in ED visits and numbers of providers and pharmacies
Laws/Regulations/Policies

- Some states have enacted laws and policies aimed at reducing diversion, abuse, and overdose
- Policies can strengthen health care provider accountability
- Safeguard access to treatment when implementing policies
- Rigorous evaluations to determine effectiveness and identify model aspects
Insurer/Pharmacy Benefit Manager (PBM) Mechanisms

- Reimbursement incentives/disincentives
- Formulary development
- Quantity limits
- Step therapies/prior authorization
- Real-time claims analysis
- Retrospective claims review programs
Clinical Guidelines

- Improve prescribing and treatment
- Basis for standard of accepted medical practice for purposes of licensure board actions
- Several consensus guidelines available
- Common themes among guidelines
Vital Signs: Risk for Overdose from Methadone Used for Pain Relief — United States, 1999–2010

On July 3, 2012, this report was posted as an MMWR Early Release on the MMWR website (http://www.cdc.gov/mmwr).

Abstract

Background: Vital statistics data suggest that the opioid pain reliever (OPR) methadone is involved in one third of OPR-related overdose deaths, but it accounts for only a few percent of OPR prescriptions.

Methods: CDC analyzed rates of fatal methadone overdoses and sales nationally during 1999–2010 and rates of overdose death for methadone compared with rates for other major opioids in 13 states for 2009.

Results: Methadone overdose deaths and sales rates in the United States peaked in 2007. In 2010, methadone accounted for between 4.5% and 18.5% of the opioid deaths distributed by state. Methadone was involved in 31.4% of OPR deaths in the 13 states. It accounted for 39.8% of single-drug OPR deaths. The overdose death rate for methadone was significantly greater than that for other OPR for multidrug and single-drug deaths.

Conclusions: Methadone remains a drug that contributes disproportionately to the excessive number of opioid pain reliever overdoses and associated medical and societal costs.

Implications for Public Health Practices: Health-care providers who choose to prescribe methadone should have...
The findings and conclusions in this report are those of the author and do not necessarily represent the views of the Centers for Disease Control and Prevention.